

RESIDUAL FREQUENCY ERROR ESTIMATION IN AN  
OFDM RECEIVER

ABSTRACT OF THE DISCLOSURE

An OFDM receiver configured for measuring frequency error based on comparing prescribed pilot tones from a prescribed group of consecutive symbols in a received OFDM signal. A complex conjugate generator is configured for generating complex conjugates of the prescribed pilot tones of a first subgroup of the consecutive symbols. A multiplier is configured for generating a complex pilot product, for each symbol subgroup position, by multiplying the pilot tones of a second subgroup symbol at the corresponding symbol subgroup position with the respective complex conjugates of the first subgroup symbol at the corresponding symbol subgroup position. A complex summation circuit sums the complex pilot products of the symbol subgroup positions to obtain an accumulated complex value. A error calculator calculates the frequency error from the accumulated complex value for use in correcting frequency offset.